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ABSTRACT

In the information age of instant access to libraries, databases, information centers, organizations, government agencies, and self-appointed experts worldwide, it is hard to decide where to turn for accurate, reliable, and up-to-date information about science education. This digest provides an annotated listing of World Wide Web resources and contact information pertaining to science education. Though not an exhaustive list of everything that is available, the information provided here represents a range of resources as starting points in the quest for information. The list is organized by the following categories: (1) Organizations; (2) Research and Information Centers; (3) Publications; (4) Journals; and (5) World Wide Web Resources. (CCM)

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In this information age of instant access to libraries, databases, information centers, organizations, government agencies, and self-appointed experts worldwide, where do you turn for accurate, reliable, and up-to-date information about science education? There are many competing voices hoping to influence the practices and policies of teachers, schools, parents, and administrators, so it seems important to have confidence in one's sources of information. Listed here are some of the key information sources used by parents, researchers, and other professionals. There are many more local, regional, national, and international resources not listed here, but these are reliable starting points in your quest for information.

Organizations

American Association for the Advancement of Science

http://www.aaas.org/

This organization is dedicated to promoting and advancing science and technology across all disciplines throughout the United States by increasing public understanding and appreciation of science through increased education in our schools and in our society. This site includes AAAS history and membership information as well as links and AAAS-affiliated activities.

National Association of Biology Teachers

http://www.nabt.org/

NABT is a professional organization for biology teachers. The organization provides new and updated resources and promotes education in biology and science for all students. This site offers classroom resources for teachers, conference schedules, and listings of other related activities.

National Science Education Leadership Association

http://science.cc.uwf.edu/nsela/nsela.html/

NSELA approaches involvement in science education from a slightly different perspective, that of a supervisory role. Through the training and education of those in roles of science education supervisors, NSELA hopes to further science education in our schools and society.

National Association for Research in Science Teaching

http://science.cc.uwf.edu/narst/narst.html/

The purpose of NARST is to promote research in science education (at all educational levels) and to disseminate those findings in a way which is useful to science teaching. NARST holds a major national conference each year, and is looked on as one of the leaders in publishing science education research. This site offers NARST information, as well as past research articles, and links to other science education sites.

National Science Teachers Association

http://www.nsta.org/

NSTA is the largest professional association of science teachers, having over 53,000 members. It is devoted to the promotion of excellence and innovation at all levels of science teaching. The NSTA web site includes numerous resources for teachers and all science educators, as well as conference schedules, publications, and links to other science education sites. NSTA also publishes several journals of interest, including: *Science and Children, Science Scope, The Science Teacher, and The Journal of College Science Teaching.*

Association for the Education of Teachers in Science

http://www.aets.unr.edu/

AETS is the professional association for science educators involved in the preservice and inservice preparation of school science teachers at all levels. The Association publishes the *Journal of Science Teacher Education.*

Research and Information Centers

Listed below are locations on the World Wide Web which contain accessible and searchable databases of information relating to science education. These web sites also contain links to numerous other resources and organizations.

ERIC/Clearinghouse for Science, Mathematics, and Environmental Education

http://www.ericse.org/

Located at The Ohio State University, ERIC/CSMEE contributes to the ongoing development of the world's largest education-related database, and produces numerous science education publications each year. The Clearinghouse website contains many science education links, lists, organizations, and publications for educators at all levels.

Eisenhower National Clearinghouse for Mathematics and Science Education

http://www.enc.org/

The ENC is a national repository for instructional materials in mathematics and science. The Clearinghouse produces informational documents of interest to educators, and the ENC website includes a searchable database of archived materials.

National Center for Improving Student Learning and Achievement in Mathematics and Science

http://www.wcer.wisc.edu/ncisla/

NCISLA was established to create and validate sets of principles for the design of classrooms that promote understanding in K-12 science and mathematics. This organization also synthesizes and disseminates research on K-12 science education, teacher preparation, and vocational education.

Association of Science-Technology Centers

http://www.astc.org/

Over 400 hands-on science museums are represented by this organization, promoting the importance of learning science by doing science. This site also offers information regarding education, conferences, exhibits, and other programs.

National Institute for Science Education

http://www.wcer.wisc.edu/nise/

Promoting and furthering science, mathematics, engineering, and technology education is the goal of NISE. This organization seeks to research and implement new science programs throughout the United States in ways that will most benefit teachers and students.

National Center for Science Education

http://natcenscied.org

NCSE's chief goal is to promote the teaching of science-oriented principles in the classroom, especially through the teaching of evolution. This site provides information regarding evolution and its teaching, as well as listings of NCSE activities and resources for teachers.

Journals

American Biology Teacher

http://www.nabt.org/publications_journals.html

This is the official journal of the National Association of Biology Teachers. It is geared to high school biology teachers and provides articles dealing with current issues in science as well as classroom activities and experiments students can do to investigate many of these topics.

International Journal of Science Education

This journal is published in London and publishes reports and findings from research in science education. Article topics range from practical classroom applications to theoretical considerations.

Journal of Research in Science Teaching

http://science.coe.uwf.edu/NARST/NARST.html

This is the official journal of the National Association for Research in Science Teaching. The journal focuses on research in all areas of science education, with articles ranging from very practical to very theoretical considerations.

Journal of Science, Education, and Technology

This journal provides an interdisciplinary forum for researchers studying the improvement and enhancement of science education through use of technology.

School Science and Mathematics

http://osu.orst.edu/pubs/ssm/

This is the official journal of the School Science and Mathematics Association. Articles found here relate to new findings in the teaching of science and mathematics. Many of the issues considered relate to the integration of science and mathematics.

Science and Children

http://www.nsta.org/pubs/sc/

This is one of four journals published by the National Science Teachers Association, and it is devoted to science teaching at preschool through middle school levels.

Science Education

http://www.interscience.wiley.com/jpages/0036-8326/

This independent, peer-reviewed journal focuses on theoretical research issues in science education. Published articles typically present research findings or programmatic outcomes of projects.

Science Teacher

http://www.nsta.org/pubs/tst/

This journal, published by the National Science Teachers Association, is designed for secondary level science teachers. The focus is on raising important science issues and their applications to classroom settings.

Publications

National Science Education Standards (National Research Council) This publication is an excellent resource for the current educational standards in science for grades K-12. The expectations for each grade level are discussed, and the definitions of key terms are presented.

Benchmarks for Science Literacy (AAAS) and ***Science for All Americans*** (AAAS) These publications are very much alike in their call for science literacy of our children as well as the general population. Both of these reports discuss issues related to Project 2061, which has a goal of science literacy for all Americans.

World Wide Web Resources

Though there are hundreds of websites offering information and resources for science education, the following sites are particularly useful due to their comprehensive nature or unique features. For extensive listings of more science-related websites, see the Awesome Library-Science at *http://www.2.awesomelibrary.org/Classroom/Science/Science.html*or the Science section of the Librarian's Index to the Internet [*http://sunsite.berkeley.edu/InternetIndex/*].

National Library of Education

http://www.ed.gov/NLE/

A division of the U.S. Department of Education, the NLE provides many educational research publications in both electronic form and hard-copy formats. The NLE website includes a searchable index, as well as information about the Library and its activities.

Question-Answering Services

There are many websites where you can submit science-related questions. In addition to the few listed here, please refer to the *Scientific American* page [*http://www.sciam.com/askexpert/*] or the listing at *http://www-hpcc.astro.washington.edu/scied/sciask.html* for more question-answering services.

Ask A Scientist

http://olbers.kent.edu/alcomed/Ask/ask.html/

The ALCOM science center provides this unique service, allowing general questions to be asked regarding physics, chemistry, mathematics, computer science, polymer science, and display engineering.

Ask A Physicist

http://web.physics.twsu.edu/physics/askphy.htm/

This service is offered in conjunction with Lake Afton Public Observatory and the Wichita State University.

Ask A Geologist

http://walrus.wr.usgs.gov/docs/ask-a-ge.html/

The U.S. Geological Survey offers this service, responding to questions dealing with rocks, maps, volcanoes, earthquakes, and others.

Ask The Astronomers

http://umbra.nascom.nasa.gov/spartan/ask_astronomers.html/

This site, operated by NASA, responds to astronomical questions and hosts video conferences.

Ask An Astronaut

http://www.nss.org/askastro/home.html/

Browse the astronaut archives or ask a question to a specific astronaut.

AskERIC Information Center

http://ericir.syr.edu/

The AskERIC website offers both access to the ERIC database and a question answering service for school-related questions. Questions are generally answered within 48 hours, and answers include sample searches of the ERIC database and a compilation of Internet resources.

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The Educational Resources Information Center is a nationwide information system initiated in 1966 by the U.S. Department of Education. ERIC has developed the largest and most frequently used education-related database in the world. For information, call 1-800-538-3742.